# Cardiac Device Remote Monitoring – Frequency of Clinically Important Event in Relation to Intervention.

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**Introduction**: Remote cardiac device monitoring (RCDM) has been an advancing technology in the field for many years. The analysis, interpretation and subsequent management of patient's device transmission information relies on availability and structure of response in the cardiac arrhythmia team. Due to the large amount of data being received a delay in discovery and/or intervention may be occurring. The aim of this clinical audit was to evaluate the efficiency and quality of care of RCDM in patients with cardiac arrhythmia and in particular, to assess if guidelines are established and functioning appropriately.

**Method**: A retrospective clinical audit completed from January 1st until February 2nd 2021. All remote device transmissions were observed on the Irish National Pacemaker Registry (Heart Rhythm Ireland). Of these reports, transmissions from 12 patients were selected due to their transmissions being clinically relevant events. Investigation of such transmissions were examined on the patient-specific remote monitoring system. Interviews with five of the cardiac physiologists were conducted to gather the outcome for these 12 patients along with the timeframe to outcome. Data was analyzed using Microsoft excel.

**Results**: Of the 122 transmissions in January, 14 transmissions from 12 patients had clinically relevant events that required follow-up. A time range of 8 – 123 hours was recorded from the initial cardiac event to when an outcome occurred, with an average of 56 hours (standard deviation 38.4 hours). Subdivided into specific event and the time to intervention can be appreciated in *Chart 1*.

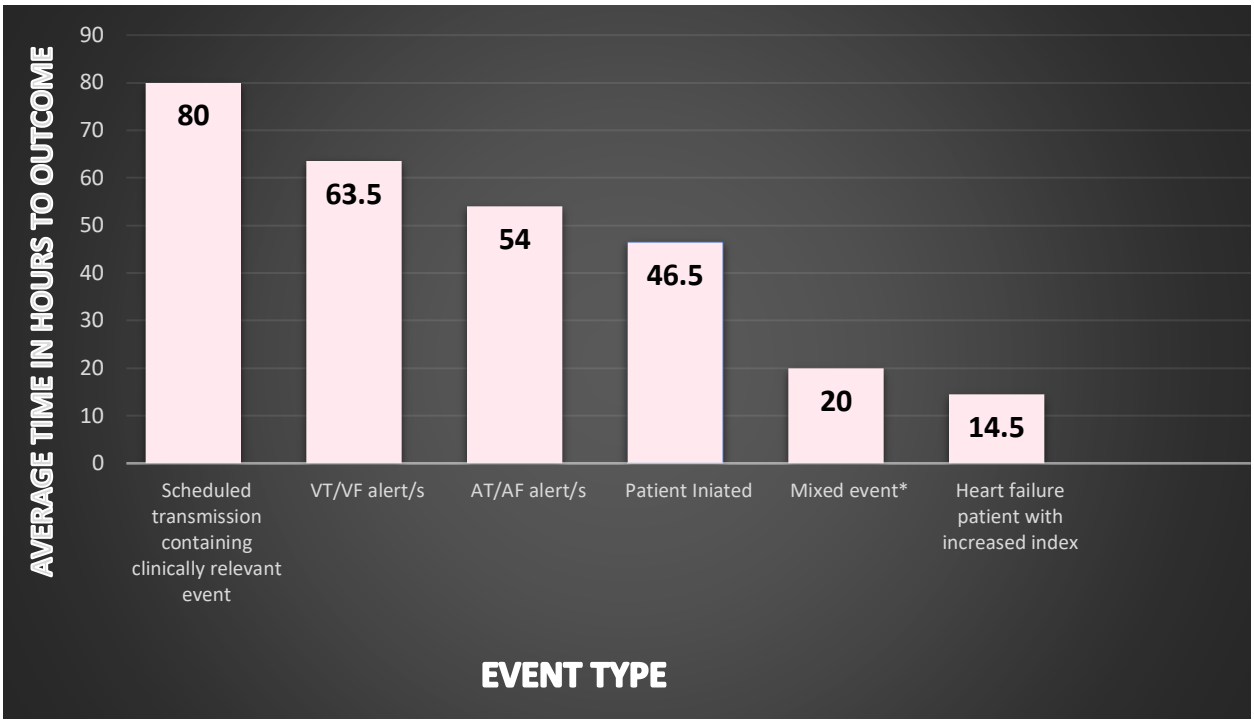


*Chart 1*. Average time to outcome subdivided into event type. *only one event occurred and thus not average time.

**Conclusion**: Data shows a large variation in time-to-intervention. In-house guidelines lack timeframes for intervention. Additionally, no standardized protocols from the European Society of Cardiology or the Health Service Executive allows room for error. Recommendations such as a standardized protocol specific for each event be made, along with a protocol for triaging of alerts/transmissions, in order to ensure best practice.